Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of claims:

1. **(Currently Amended)** An anti-fouling composition comprising

(i) a surface coating material;

(ii) a first enzyme and a first substrate, wherein the first substrate is ~~selected from~~ an oligomer or a polymer ~~oligomers and polymers~~ of a second substrate ~~substrates~~, said second substrate being a substrate for an oxidative ~~enzymes~~ enzyme, and wherein first enzyme is capable of generating said second substrate from said first substrate; and

~~(iii) a first enzyme;~~

(iv) a second enzyme, wherein the second enzyme is an oxidase; and wherein said second enzyme generates an anti-fouling compound when acting on said second substrate ~~wherein the first substrate and the first enzyme react to generate a second substrate, wherein the second substrate is selected from the group consisting of D-glucose, D-galactose, D-mannose, maltose, lactose and cellobiose, upon which the second enzyme acts, whereby an anti-foulant compound is generated which is long-acting~~.

2. **(Currently Amended)** A composition according to claim 1 wherein the ~~second enzyme~~ oxidase is from a marine algae.

3. **(Currently Amended)** A composition according to claim 1 wherein the ~~second enzyme~~ oxidase is from *Chondrus crispus*.

Claims 4-8. **(Cancelled)**

9. **(Previously Presented)** A composition according to claim 1 wherein the first enzyme is amyloglucosidase.

10. **(Previously Presented)** A composition according to claim 1 wherein the first substrate is starch.

11. **(Previously Presented)** A composition according to claim 1 wherein the composition further comprises a binder to immobilise at least one of the constituents of the composition.

12. **(Original)** A coating consisting of a composition according to claim 1.

13. **(Original)** A coating according to claim 12 formulated for treatment of a surface selected from outdoor wood work, external surface of a central heating system, and a hull of a marine vessel.

14. **(Previously Presented)** A marine anti-foulant consisting of a composition according to claim 1.

15. **(Previously Presented)** A marine anti-foulant according to claim 14 wherein the anti-foulant is self-polishable.

Claims 16-31. **(Cancelled)**

32. **(Cancelled-Currently Amended)** The composition of claim 31, wherein the hexose oxidase is from *Chondrus crispus*.

33. **(Cancelled)**

34. **(Currently Amended)** The composition of claim [[30]] 1, wherein the second substrate is a sugar.

35. **(Previously Presented)** The composition of claim 34, wherein the sugar is glucose.

36. **(Cancelled)**

37. **(Cancelled)**

[[37]] 38. **(Cancelled-Currently Amended)** The composition of claim 1, wherein the anti-foulant acts for at least four weeks.

[[38]] 39. **(Cancelled-Currently Amended)** The composition of claim 1, wherein the anti-foulant acts for at least two years.

[[39]] 40. **(Currently Amended)** The composition of claim 1, wherein the ~~second enzyme~~ oxidase is a hexose oxidase.

[[40]] 41. **(Currently Amended)** The composition of claim 1, wherein the composition is formulated as a coating, lacquer, stain or enamel.

[[41]] 42. **(Currently Amended)** The composition of claim [[12]] 1, wherein the ~~coating materials are selected from~~ composition further comprises a surface coating material selected from polyvinyl chloride resins in a solvent based system, chlorinated rubbers in a solvent based system, acrylic resins and methacrylate resins in solvent based or aqueous systems, viny chloride-vinyl acetate copolymer systems as aqueous dispersions or solvent based systems, butadiene copolymers such as butadiene-styrene rubbers, butadiene-acrylonitrile rubbers, and butadiene-styrene-acrylonitrile rubbers, drying oils such as linseed oil, alkyd resins, asphalt, epoxy resins, urethane resins, polyester resins, phenolic resins, derivatives and mixtures thereof.

43. **(New)** The composition of claim 40, wherein the hexose oxidase comprises the amino acid sequence set out in SEQ ID NO: 2.

44. **(New)** The composition of claim 40, wherein the hexose oxidase is obtained by cloning and expression in recombinant host organisms of a gene encoding the protein.

45. **(New)** The composition of claim 1, wherein the first substrate is water insoluble.

46. **(New)** The composition of claim 1, wherein the first substrate is selected from the group consisting of starch, lactose, cellulose, dextrose, peptide, inulin and mixtures thereof.

47. **(New)** The composition of claim 1, wherein the oxidase is from a marine organism.

48. **(New)** The composition of claim 1, wherein the first enzyme and the second enzyme are incorporated in the surface coating material.

49. **(New)** A method for releasing an anti-fouling compound from a surface coating comprising incorporating in a surface coating:

(i) a first enzyme and a first substrate, wherein said first substrate is an oligomer or a polymer of a second substrate, said second substrate being a substrate for an oxidase enzyme, and wherein said first enzyme generates said second substrate from said first substrate;

(ii) a second enzyme, wherein said second enzyme is an oxidase and wherein the second enzyme generates an anti-fouling compound by acting on said second substrate.

50. **(New)** A method for treating a surface of a vessel comprising applying a coating material to the surface, the coating material comprising:

(i) a first enzyme and a first substrate, wherein said first substrate is an oligomer or a polymer of a second substrate, said second substrate being a substrate for an oxidase enzyme, and wherein said first enzyme generates said second substrate from said first substrate; and

(ii) a second enzyme, wherein said second enzyme is an oxidase and wherein the second enzyme generates an anti-fouling compound by acting on said second substrate.